STATE OF MONTANA

EVIDENCE THAT 2007 WILDFIRES INFLUENCED MONITORED AIR QUALITY DATA

For purposes of justifying Montana's request for data exclusion as a result of wildfire smoke adversely affecting ambient air quality monitoring data collected June through September 2007, the following evidence demonstrates the satisfaction of requirements of 40 CFR §51.14 (c)(3)(iii)(A)(B)(C) and (D):

(A): [As set forth in §50.1(j)], the event is an event that affects air quality, is not reasonably controllable for preventable, is an event caused by human activity that is unlikely to recur at a particular location or a natural event, and is determined by the Administrator in accordance with 40 CFR 50.14 to be an exceptional event. It does not include stagnation of air masses or meteorological inversions, a meteorological event involving high temperatures or lack of precipitation, or air pollution relating to source noncompliance.

To prove natural events were the causative factor for the anomalous PM-10 and PM-2.5 values represented by each flagged data day and location, Montana relies on its forest fire smoke update reports. During June, July, August, and September, Montana's meteorologist issued daily forest fire smoke update reports for the duration of any wildfire event. The reports were generally posted before noon each day during which a wildfire occurred that affected Montana's air quality.

Each report also contains

- satellite images from the National Oceanic and Atmospheric Administration showing the active fires in Montana and areas upwind and the associated smoke plume activity;
- graphics from the National Environmental Satellite, Data, and Information Service;
- analyses of current meteorological conditions;
- advisories and precautionary statements;
- links to further information; and
- smoke activity forecasts.

The reports also reference the the USDA Forest Service's Remote Sensing Application Center used for wildland fire definition and tracking. Wildland fires are considered natural events as human activity plays little or no direct causal role in their origin or maintenance. By their nature, as contrasted with managed fires, wildland fires are not reasonably controllable or preventable.

Many factors influenced Montana's 2007 wildfire events. In part, the severity of any fire season may be a function of warm, dry weather but the relationship is not direct. In past summers, Montana experienced similar meteorological conditions and less fire activity because other, more significant factors were absent. Several areas of the state this summer did not experience wildfires or associated smoke effects even though the weather regimes were similar. The events were primarily a function of the source activity (hourly/daily fire intensity and amount), wind direction, and local dispersion patterns and not the direct result of high temperatures or lack of precipitation. Additionally, while the smoke effects of any wildfire event may be exacerbated by air stagnation or meteorological inversion, particularly on a diurnal basis as winds decrease during the night and smoke settles into cooler, low-elevation airsheds, these air stagnation or meteorological inversions are not influencing the occurrence of the events themselves.

While the administrator may not, a priori, make a determination regarding the characterization of the events submitted as exceptional events, Montana asserts this evidence satisfies the requirement of 40 CFR §51.14(c)(3)(iii)(A), despite the defect in the rule's logic.

(B): There is a clear causal relationship between the measurement under consideration and the event that is claimed to have affected the air quality in the area.

For each event shown in the reports and spreadsheets for each monitoring location and as referenced in the daily forest fire smoke update reports, the cause of any flagged higher-than-average air quality monitoring measurement is a wildfire event.

(C): The event is associated with a measured concentration in excess of normal historical fluctuations, including background.

The spreadsheets for each monitoring day and location compare the measured value with both the historical monthly maxima and mean for that day as averaged for 2004, 2005, and 2006 data. The historical comparison shows wildfire events described in the forest fire smoke update reports are associated with values in excess of normal historical fluctuations.

(D): There would have been no exceedance or violation but for the event.

Montana is not aware of any evidence implicating any other agent or event as a cause of or significant contributor to the higher-than-average values represented by the flagged data presented in the spreadsheets. But for the occurrence of wildfire events, it is more likely than not that the higher-than-average values would not have been recorded. One may reasonably conclude wildfire events were the cause in fact of the higher-than-average values.